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MARGARITIFERA MARRIANAE, A NEW SPECIES OF
UNIONACEA (BIVALVIA: MARGARITIFERIDAE)
FROM THE MOBILE-ALABAMA-COOSA AND
ESCAMBIA RIVER SYSTEMS, ALABAMA

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The species from Alabama, described here as distinct, was included with *Margaritifera hembeli* (Conrad, 1838) from Louisiana, by Simpson (1914: 523) and Clench and Turner (1956: 148). *M. hembeli* was figured by Conrad (1838: 93, pl. 51, fig. 1) and the holotype is in the Academy of Natural Sciences of Philadelphia 56639. It has no locality data, but was sent from New Orleans, Louisiana. A specimen was figured by Hanley 1856: 383, pl. 24, fig. 3); by Sowerby (1866, pl. 33, species 172) from a specimen in the H. Cuming collection now in the British Museum (Natural History) 1964174; and here (plate 41, fig. 1). In 1972 Joseph P. E. Morrison collected *hembeli* in Brown and Loring Creeks, Rapides Parish, Louisiana and he realized that the Alabama *Margaritifera* was different from it (pers. comm.). I take pleasure in naming the undescribed species for my wife, Marrian Geer Gleason Johnson.

Davis and Fuller (1981) reduced the Margaritiferidae to the subfamily Margaritiferinae, but their classification is being challenged by Douglas Smith (ms.). Thanks are extended to Dr. George M. Davis of the Academy of Natural Sciences of Philadelphia who kindly lent me the figured type of *Unio hembeli* as well as the extensive series of voucher specimens of it, ANSP 334426, from Rapides Parish, Louisiana which were used in the Davis and Fuller (1981) paper.

Margaritifera marrianae new species

Margaritana hembeli (Conrad, 1838) *partim*. Simpson, 1914. Catalogue of the naiades 1: 523; Clench and Turner, 1956. Bull. Florida State Mus. 1: 148, pl. 5, fig. 1. [The figured specimen MCZ 148819 is a paratype of *M. marrianae*].

Margaritana hembeli Ortmann 1912, *non* Conrad. Ann. Carnegie Mus. 8: 235, fig. 3, 3a. [anatomy of *M. marrianae*].

Margaritana hembeli (Conrad, 1838) *ssp.* Stansbery, 1976. Bull. Alabama Mus. Nat. Hist., No. 2: 44.

Holotype. MCZ 28491 from Hunters Creek, 8 mi. SW of Evergreen, Conecuh Co., Alabama.

Paratypes: MCZ 62595 from the same locality; and figured paratype (Clench and Turner, 1956: pl. 5, fig. 1) MCZ 148819 from Horse Creek, near Luverne, Crenshaw Co., Alabama.

		Measurements	
Length	Height	Width	
mm	mm	mm	
95	50	29.5	Burnt Corn Creek, Conecuh Co., Alabama
83	41	24.5	Holotype MCZ 28491

Description: Shell, medium, reaching 95 mm. in length. Outline oblong, obovate to subrhomboidal. Valves subinflated, inequilateral; shell solid. Anterior end regularly rounded or subtruncate; posterior end feebly pointed below the medial line, forming a slight angle at the base. Ventral margin usually slightly arcuate though sometimes straight. Dorsal margin obliquely descending from the umbos, joining the descending posterior margin in a slight angle. Hinge ligament prominent. Posterior ridge low, rounded, and somewhat double. Posterior slope strongly corrugately plicate. Umbos slightly elevated above the hinge line, located in the anterior third of the shell, their sculpture not observed. Surface of the shell below the posterior ridge with radial ridges which sweep forward and downward. Periostracum smooth and shiny on the disk somewhat roughened on the posterior slope, olivaceous, or blackish brown, sometimes yellowish brown posteriorly.

Left valve with two pseudocardinal teeth, one in front of the other, both somewhat triangular, low, stumpy, and rough. Hinge line long and narrow, two straight feebly granular lateral teeth. Right valve with one triangular, crenulated pseudocardinal, and the vestige of a second behind it; one lateral tooth. Beak cavities rather shallow, with dorsal muscle scars which often extend into the disk. Anterior adductor muscle scars well impressed, posterior ones faint. Pallial line distinct. Nacre whitish or lurid purplish, moderately iridescent.

Breeding season. Not known.

Habitat. "Lives only in water free from lime...in the waters of pine barrens" (Frierson, 1927: 24).

Remarks. *M. marrianae*, known only from Alabama, differs from *M. hembeli*, known only from western Louisiana, in that it has an arcuate ventral margin, and is elaborately sculptured on the posterior slope and disk, whereas the ventral margin of *hembeli* is generally straight or slightly curved and, if sculptured at all, it is very faintly so, and limited to the posterior slope and ridge. The surface below the posterior ridge and disk is not sculptured.

Range. Limestone Creek of the Mobile-Alabama-Coosa and Escambia River Systems.

Specimens Examined

MOBILE-ALABAMA-COOSA RIVER SYSTEM

ALABAMA RIVER DRAINAGE—*Alabama*: Limestone Creek, near Monroeville, Monroe Co. (Museum of Zoology, University of Michigan).

ESCAMBIA RIVER SYSTEM

CONECUH RIVER DRAINAGE—*Alabama*: Burnt Corn Creek, near Burnt Corn, Monroe Co. Hunters Creek, 8 mi. SW Evergreen; Otter Creek, branch of Murder Creek, near Evergreen; *both* Conecuh Co. Horse Creek, near Luverne, Crenshaw Co. (*all*) Museum of Comparative Zoology.

Plate 41

Fig. 1. *Margaritana hembeli* (Conrad). [Bayou] Clear, 20 mi. S of Alexandria, Rapides Parish, Louisiana. MCZ 190124. Length 88, height 47, width 27 mm. (about nat. size).

Fig. 2. *Margaritana marrianae* new species. Hunters Creek, 8 mi. SW of Evergreen Conecuh Co., Alabama. Holotype MCZ 28491. Length 83, height 41, width 24.5 mm. (about nat. size).

Fig. 3. *Margaritana marrianae* new species. Horse Creek, near Luverne, Crenshaw Co., Alabama. Paratype MCZ 148819. Length 72, height 39, width 21 mm. (natural size). After Clench and Turner (1956, pl. 5, fig. 1).

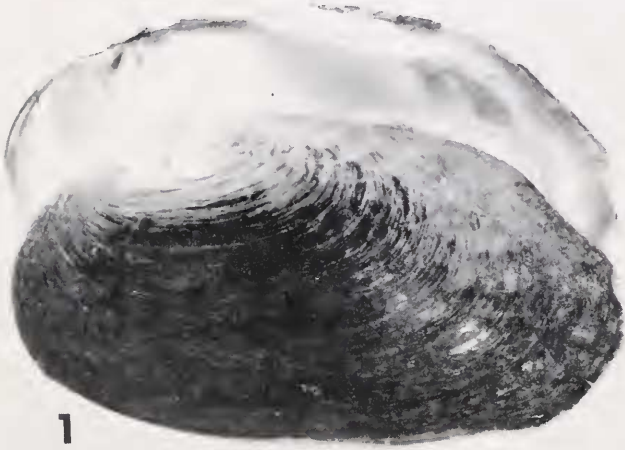


Plate 41

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